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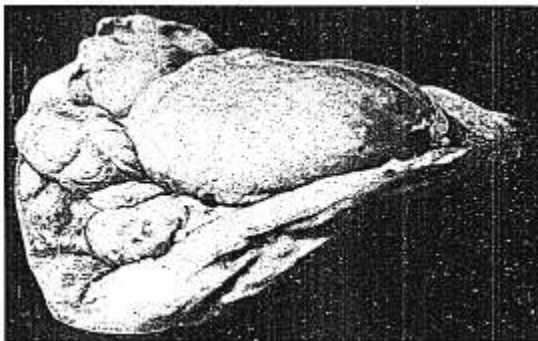
TWO CASES OF RETROPERITONEAL HERNIA.

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WHILE, strictly speaking, there are four forms of retroperitoneal hernia, the cases herewith reported all belonged to that variety which occurs into the duodenal fossæ.

CASE I.—Mrs. M. J., aged thirty years, colored, was shot through the heart, dying immediately. At the necropsy, on making the usual median incision and cutting through the abdominal wall, instead of

FIG. 1.



coming upon the omentum, or the intestines, a white, glistening sac (Fig. 1) was found, which seemed at first to be a mesenteric cyst or an ovarian tumor. After reflecting the abdominal walls and tracing

the relations, however, it was discovered to be a case of retroperitoneal hernia.

The mass, which measured 17.5 cm. by 27 cm., reminded one of the gravid uterus except that it was flattened in front. It was situated in the centre and left side of the abdomen, surrounded by the colon, extending below nearly to the promontory of the sacrum. The omentum, which was very thin and but slightly developed, was rolled up between the sac and the transverse colon. At the lower aspect of the sac on the right was an elliptical opening 5 cm. by 7.5 cm., from which 10 cm. of the lower part of the ileum escaped obliquely to join the cæcum. The remainder of the small intestine was contained within the sac.

The sac was smooth and shining; the walls thick, but translucent, so the intestinal coils could be discerned; the walls of the sac contained numerous bloodvessels, but little fat. The sac was free except on the left and above, and several folds ran off from its border and were lost in the surrounding peritoneum.

FIG. 2.



The orifice of the sac was situated low down close to the cæcum and looked forward and to the right (Fig. 2). The upper margin of this orifice was thick, fibrous, and opaque, becoming thinner below. The inferior mesenteric vein bordered the opening; the colica sinistra artery ran at some little distance from the free border. The vein was about the size of a goose-quill.

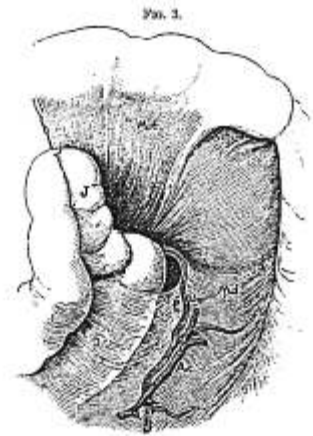
The coils of intestine in the sac were patent and moderately distended with gas, but were strongly adherent, so only part of them could be pulled out. The part that was mobile showed no changes in the mesentery, or in the bowel itself.

As regards the large intestine, the cæcum, ascending and transverse colons were in their proper places; the descending colon was in front of the sac, having been pushed forward; the rectum was normally situated. There was no congestion of the abdominal viscera or hemorrhoids.

Nothing abnormal was noted in the outward appearance of the abdomen. The walls were somewhat pendulous, but as striæ were visible this may have been due to past pregnancies.

This is a well-marked example of the mesenteric hernia of Sir Astley Cooper, the retroperitoneal hernia of Treitz, and the duodenal hernia of Jönnesco, of which less than one hundred examples have been recorded since 1776.

At first considerable confusion arose from the cases being described as "preternatural pockets, peritoneal defects, anomalies," etc. This confusion continued until 1857, when by the publication of the classical



The duodeno-jejunal fossa. (Jönnesco, after Treitz.)

D, ascending duodenum. J, jejunum. P, duodeno-jejunal fold. V.m, inferior mesenteric vein. A.c., colica sinistra artery. M.t., M.d., transverse and descending mesocolons.

work of Treitz (*Hernia Retroperitonealis*) the condition was placed on a sound anatomical basis. Treitz met with eight cases between 1847 and 1854, and from a study of these, and of eighteen cases previously mentioned by other authors, came to the conclusion that the hernia is always formed in a fossa of the duodenal region, which he called *fossa duodeno-jejunalis*; that is, it is always acquired, and that it can become strangulated.

According to this author, three things are essential for the formation of this variety of hernia:

1. A dilatable excavation of the peritoneum.
2. A resisting ring.
3. A mobile intestine pressing against the ring.

The *dilatable excavation* of the peritoneum is, according to Treitz, furnished by the fossa duodeno-jejunalis. To see this fossa it is necessary to lift up the transverse colon and draw the small intestine to the right, when the duodeno-jejunal angle will be visible. When the fossa is present a membranous fold is seen passing from the anterior surface of the lower part of the duodenum to be inserted at a variable distance on the parietal peritoneum, thus forming a little pouch—the fossa duodeno-jejunalis, or inferior duodenal fossa (Fig. 3). The opening looks directly up and the fossa will usually accommodate the finger—



The inferior and superior duodenal fossae. (Jongnesco.)

The inferior mesenteric vein at some distance from the inferior fossa, runs along the left border of the superior. Above is seen the transverse colon and mesocolon lifted up; on the left the descending colon, on the right the ascending duodenum, the two duodenal folds, and the fossae which they limit. The jejunum is drawn to the right as well as the mesentery, under which the duodenum disappears.

tip to the second phalanx; sometimes it will hold two or even three fingers. The inferior mesenteric vein and the colica sinistra artery, as a rule, border the orifice on the left. Occasionally there is a superior fossa instead, which has the same relation except that the opening looks down, and sometimes the two fossae are present at the same time (Fig. 4).

Opinions differ as to the frequency of occurrence of the fossa duodeno-jejunalis, thus: Waldeyer gives 70 per cent., Gruber 66 per cent.,

Treves 48 per cent., Debierre 50 to 75 per cent., and Jonnesco 75 per cent. for the inferior and 50 per cent. for the superior. The writer examined 1000 fresh adult bodies, with a view to ascertaining in how many it was present, with the following results:

Males.		Females.	
Bodies examined	821	Bodies examined	179
Absent	513	Absent	101
	308		78

The results are less than those quoted, but the fossa was carefully searched for and nothing counted as such unless it admitted the fingertip.

A *resisting ring* is furnished by the vascular arcade, composed, as before stated, of the inferior mesenteric vein and colica sinistra artery. This acts in the same manner as the inguinal and femoral rings for external hernias (Treitz).

A *Mobile Intestine*. According to Treitz, the increase of abdominal pressure so favorable for the production of external hernias has no effect on these forms, neither has dilatation by gas or food. Shaking of the body, on the contrary, especially if continuous and regular, as in walking, dancing, and riding, are prime factors, for in such cases the intestines press by their weight on neighboring viscera. When the hernias are of small volume the jejunum alone is involved, when of large dimensions the ileum is involved also. Complete hernias are found in adults and old persons; the incomplete in the young, as a rule.

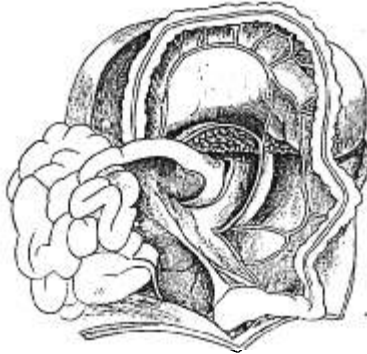
In a recent work,¹ Mr. B. G. A. Moynihan, of Leeds, refers "to the exuberant and redundant nomenclature that has been adopted by the various writers at different periods. The term that has perhaps been, on the whole, most subjected to abuse is 'duodeno-jejunal.' It has been applied indiscriminately to every variety of fossa found in this region, to fossæ which are strictly duodenal, to fossæ which are jejunal, and to fossæ which are neither; but more and worse than this is the adoption by one author of a name suggested by an earlier writer for a fossa quite different from that which is being described. The result is chaotic." Mr. Moynihan then carefully describes no less than nine different fossæ in the duodeno-jejunal region, and gives his reasons for believing that the left variety of duodenal hernia arises in the paraduodenal fossa, or fossa of Landzert (Fig. 5).

This "is situated to the left, and some distance from the ascending limb of the duodenum. The fossa is caused by the raising up of a fold, the plica venosa, by the inferior mesenteric vein—a fold which may not inaptly be described as a mesentery of that vein. Behind,

¹ On Retroperitoneal Hernia, London, 1899.

the sac is bounded by the parietal peritoneum, covering the psoas, the renal vessels, the ureter, and a portion of the left kidney. The orifice of the sac is wide, and looks down and to the right; the blind extremity is directed upward and slightly to the left. The width of the orifice

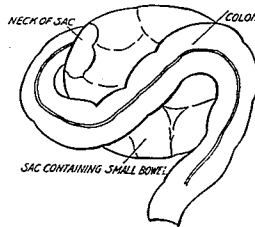
FIG. 5.



The paraduodenal fossa. (Moynihan.)

depends, of course, upon the distance between the inferior mesenteric vein and the duodeno-jejunal flexure—a distance which is capable of great variation" (Moynihan).

FIG. 6.



It seems to the writer that this opinion is well founded. If the inferior duodenal fossa (Treitz's fossa duodeno-jejunalis) were the seat, duodenal hernias should be much more common, since this inferior fossa is the most frequent of these peritoneal pouches.

In a conversation with the late Professor Wyatt Johnson, of Montreal, he stated that he had also met with a case of retroperitoneal hernia, and was good enough to send the following description and a rough sketch made at the time (Fig. 6).

CASE II.—“ In a little girl of four years, whose death was due to burns, at the post-mortem on opening the abdomen the peritoneum was smooth and shining, the vessels not injected. The small intestine was seen to lie in a separate peritoneal pouch behind the general peritoneal cavity. The opening of this was as large as the palm of the hand, with smooth, thickened edges, and was formed by part of the mesentery near the jejunum. The opening seemed to be the right side; the whole of the jejunum and ileum lay within this sac. The head of the cæcum and appendix lay outside it free and somewhat raised above the level of the right iliac fossa. The ascending colon passed over the point of the sac obliquely and to the left. The sigmoid flexure and rectum lay somewhat to the right of the median line at the brim of the pelvis.”

In Leichtenstern's¹ classical and frequently quoted article on intestinal obstruction, he states:

“ Under favorable circumstances, if the hernia is of notable size, I consider it possible to make a probable diagnosis, not a positive one, but still one that is based on reasons. The circumscribed globular distention of the mesogastrium, with retraction of the region corresponding to the colon; the firm, elastic, spherical lump which can be distinctly felt when the abdominal wall is thin, giving the impression of a large, somewhat movable cyst, and extending from the mesogastrium principally to the left; the peculiarity that this well-defined tumor always yields a sonorous note on percussion, and clear intestinal sounds on auscultation; also the presence of hemorrhoids and the loss of blood from the rectum in consequence of compression of the inferior mesenteric vein, permit, when taken in connection with the subjective troubles indicating chronic disease of the abdominal organs, a probable diagnosis to be made. In case laparotomy is performed to relieve acute strangulation, profuse hemorrhage would be caused, when the hernial orifice was enlarged, by the division of the arteria colica sinistra and the vena mesenterica inferior, which latter is usually much dilated.”

Moynihan points out that hemorrhage may be avoided by dividing the neck of the sac between two ligatures. So far only one case (Staudenmeyer's) has been diagnosed during life, but for some reason was not operated on.

The condition may be said to be a *trouville* of the dissecting table or the post-mortem room. Most of the cases have occurred in males. In some ten or twelve cases death was due to acute intestinal obstruc-

¹ Ziemssen's *Cyclopædia of the Practice of Medicine*, New York, 1876, vol. vii. p. 549.

tion. In many individuals the hernia seems to have had no effect on the duration of life; one subject was seventy-four, several others over sixty years of age. At the other extreme cases have been seen in infants of two weeks and two months, respectively. It does not appear to have yet been found to be congenital, though Moynihan claims there is no reason why it could not be.

Three cases have been successfully operated on (those of Sonnenburg, Tubby, and Neumann).

Further information may be found in Jonnesco's work,¹ as well as the later and much less diffuse one of Moynihan, which has a good bibliography.

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SPLENIC ANÆMIA. A REPORT OF THREE CASES.

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DURING the past five years the medical journals of both England and America have contained several important articles upon the subject of splenic anæmia. Prominent among them are those of Sippy,¹ Osler,² A. H. Wentworth,³ Samuel West,⁴ J. S. Fowler,⁵ and J. L. Morse.¹³ The last four writers deal with the association of splenic enlargement and anæmia in infancy, and their observations have decidedly cleared the misty atmosphere that has hung around some of the diseases of childhood.

The American writers are in entire accord as to their main conclusions, based upon the observations of cited cases. A brief abstract of the conclusions arrived at follows:

¹ Hernies Internes Retroperitoneales, Paris, 1890.